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CHARACTERISTICS OF CHILDREN RAISED IN THREE TYPES
OF FAMILIES IN TAIWAN

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Characteristics of Children Raised in Three Types of Families in Taiwan

By
C2009
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**Submitted to the graduate degree program in Department of Teaching and
Leadership (Educational Leadership& Policy Studies) and the Graduate Faculty
of the University of Kansas in partial fulfillment of the requirements for the
degree of Doctor of Philosophy.**

Dissertation Committee :

Chairperson

Dissertation defended : December, 2009

ABSTRACT

Yang Hui-Chi. *Characteristics of Children Raised in Three Types of Families in Taiwan*. Published Doctor of Philosophy Dissertation, The University of Kansas, Lawrence Campus, December 2009.

Most studies have suggested that every aspect of a family, such as the way it is organized, has some effect on what children learn and how they develop. However, few systematic and organized studies have been conducted to prove the truth of negative reports about grandparenting families. The major purpose of this study is to investigate certain characteristics, such as caregivers'/ custodians' ethnicity, family income, caregivers'/custodians' educational level, academic achievement, behavioral achievement, and risk behaviors, of children raised in three family types: two-parent, single-parent, and grandparenting in Taiwan.

Two major research questions drove this study. The first asked how factors such as caregivers'/ custodians' ethnicity, family income, caregivers'/custodians' educational level, academic achievement, behavioral achievement score, and risk behaviors differ among Taiwanese junior high school students, and how they correlate with the type of family in which students are raised. The second asked what the correlations are between the dependent variables, such as between students' family income and academic achievement score (GPA), between family income and behavioral achievement score (BAS), between caregivers'/custodians' educational level and academic achievement score (GPA), and between caregivers'/custodians' educational level and behavioral

achievement score (BAS). One hundred fifty male and female students in the seventh to ninth grades of five junior high schools and the Hsinchu Family Helper Project Center of Taiwan Fund for Children and Families (CCF/Taiwan) in the Hsinchu Area, Taiwan participated in this study. A 34-item, self-reporting questionnaire was used as instrument of data collection. After completion of data collection, data were entered into the Statistical Package for the Social Sciences (SPSS), 13th Chinese edition, to acquire the results.

Findings of this study reveal that not every characteristic found to be related with the family type in which children are raised as other studies did. Only are family income, the caregivers'/custodians' educational level, students' behavioral achievement score (BAS), and tobacco use, found to be related to family types. In addition, family income or caregivers'/custodians' educational level is not related to students' GPA or BAS. A family with a higher caregivers'/custodians' educational level would have a higher family income. A student with a high GPA tends to have a high BAS.

ACKNOWLEDGEMENTS

First of all, the achievement of this dissertation is attributed to the instruction of my dissertation committee- Dr. Suzanne Rice, Dr. Michael Imber, Dr. Marc Mahlios, Dr. Howard Ebmeier, Dr. Cynthia Akagi, and Dr. Lynn R. Marotz.

I would express my greatest and specific appreciation to my advisor- Dr. Suzanne Rice. She gave me much instruction and inspiration on my dissertation. Furthermore, the interaction and communication between us put a lot of spurs to my motivation of learning during I studied at KU.

I also appreciate the Dean of the Academic Division and the Dean of Counseling at the following schools-Chien-Kung Junior High School, San-Min Junior High School, Chien-Hua Junior High School, Hu-Lin Junior High School, and Nan-Hua Junior High School, and Mr. Shen –the Director of Hsinchu Family Helper Project Center of Taiwan Fund for Children and Families for their assistance and support on the data collection for this study.

Finally, I really appreciate my families and friends who gave me ceaseless concerns when I worked on my dissertation. I wish that I can share my glory and achievement with them, and I will proceed to the next stage and challenge of my career with my greatest gratitude.

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CHAPTER I

INTRODUCTION

Many studies have supported the notion that the family significantly influences children's development and learning. However, few systematic studies have been conducted to find the different characteristics of children raised in grandparenting families and other family types. This study is conducted to explore certain characteristics of children raised in three family types: two-parent, single-parent, and grandparenting, and is limited to families living in Taiwan. This chapter presents an overview of this study. The problem statement, purpose of the study, research questions, hypotheses, significance of the study, scope of the study, and relevant terms used in this study will be addressed here.

Problem Statement/Background

The family is an important place for children's growth, development, and learning. There is ample evidence that a range of family characteristics, such as the family type, affect the experiences children have at school (Procidano & Fisher, 1992). However, most educational and social studies of family type have focused on the differences between intact families and stepfamilies or between two-parent families

and single-parent families.

I am interested in studying the different characteristics of children raised in grandparenting families, first, because grandparenting families are a phenomenon that has recently emerged from the social transformation and economic development in Taiwan (Huang, 2003). According to the statistics, in Taiwan the number of nuclear families decreased 5.2% and the number of extended families decreased 1.7% between 1995 and 2000. However, single-parent families and grandparenting families increased 1.1% and 0.3% respectively (Huang, 2002). To be more specific, in Taiwan, grandparenting families counted for about 3% of all families, and the number of children in primary schools being reared by a single parent or by grandparents was estimated to be over 11% in 2000 (Huang, 2002; Liu, 2003). According to the most recent investigation by the Department of Auditing, Taiwan, 800,000 persons older than six have been raised by their grandparents, and 450,000 children younger than six are presently being raised by their grandparents in 2006 (*Grandparenting: 1,250,000*, 2007).

In Taiwan, because of the Chinese tradition, culture, and values, grandparents can be expected to raise their grandchildren when parents are unable to raise their

own children (Chiu, 2004; *Finding the grandparenting families at high risks*, 2007).

The second reason I am interested in studying characteristics of children raised in grandparenting families is that I would like to discover if, as many reports have claimed, the children raised in grandparenting families really have poorer outcomes on various measures than children raised in other family types. For example, Chen's (2000) analysis of grandparenting families in Taiwan described such negative outcomes as a low GPA and behavioral problems. Chung's (2005) report on "grandparenting because of poverty" concluded that children from grandparenting families are vulnerable to low GPA, behavioral problems, and abnormal personalities. Wu's (2006) report about grandparenting described children from grandparenting families as lagging in academic achievements when compared with other children. Lee, Chang, & Chao's (2006) report on the increasing frequency of grandparent raising their grandchildren emphasized that children from these families tend to have behavioral problems because of poor communication between grandparents and grandchildren. A newspaper's report indicated that the most disadvantageous influence resulting from grandparenting families is children's insufficient ability of achieving high GPA because grandparents can not instruct their grandchildren

(*Finding the grandparenting families at high risks*, 2007). Furthermore, Strom & Strom (2000) mentioned that children of grandparenting families tend to have emotional disturbances, such as tantrum, fear, obsession, and restless.

However, few systematic and organized studies about grandparenting families support these negative reports in Taiwan. Living in a society with the majority of two-parent or single-parent families, it can be expected that members of grandparenting families may have to deal with special pressures and problems. Under such circumstance, children in grandparenting families will not experience the same educational environment as that of children raised in other family types. Furthermore, children of grandparenting families may experience disadvantageous influences, such as grandparents' insufficient knowledge of child rearing or economic hardships (*Finding the grandparenting families at high risks*, 2007).

This study focuses on adolescent children in junior high schools to better understand adolescent children's specific characteristics, such as academic achievement and misbehavior, that can be associated with being raised in different family types.

Statement of Purpose/ Research Questions and Hypotheses

The overarching purpose of this study is to explore certain characteristics of Taiwanese children raised in three family types: two-parent, single-parent, and grandparenting. More specifically, this study tests the following research questions and null hypotheses:

Research Question # 1

How do factors including caregivers'/custodians' ethnicity, family income, caregivers'/custodians' educational level, academic achievement (GPA), behavioral achievement (BAS), risk behaviors (including tobacco use, alcohol drinking, drug use, sexual behavior, violent behavior, and attempted suicide) differ according to the type of family in which students are raised: two-parent, single-parent, or grandparenting?

Hypothesis 1. The ethnicity of caregivers/custodians is significantly correlated with the type of family in which students are raised.

Hypothesis 2. There is a significant difference in family income among two-parent families, single-parent families, and grandparenting families.

Hypothesis 3. There is a significant difference in caregivers'/custodians' educational level between two-parent families, single-parent families, and

grandparenting families.

Hypothesis 4. There is a significant difference in students' GPA depending on whether they are raised in two-parent families, single-parent families, or grandparenting families.

Hypothesis 5. There is a significant difference in students' Behavioral Achievement Score (BAS) depending on whether they are raised in two-parent families, single-parent families, or grandparenting families.

Hypothesis 6. Students' risk behavior is significantly correlated with their family type.

Research Question # 2

What are the correlations of dependent variables, such as between students' family income and academic achievement score (GPA), between family income and behavioral achievement score (BAS), between caregivers'/custodians' educational level and the students' academic achievement score (GPA), and between caregivers'/custodians' educational level and the students' behavioral achievement score (BAS)?

Hypothesis 1. A higher level of family income is significantly correlated with

students' higher GPA.

Hypothesis 2. There is a significant correlation between family income and students' Behavioral Achievement Score (BAS).

Hypothesis 3. Caregivers'/custodians' educational level is significantly correlated with students' GPA.

Hypothesis 4. Caregivers'/custodians' educational level is significantly correlated with students' BAS.

Significance

Few systematic studies about grandparenting families have been conducted in Taiwan. The results of this study will be of special interest to parents, grandparents, and professional workers in the fields of education and social welfare because an understanding of family influences can help educational and social welfare professionals communicate effectively with children, build constructive partnerships with students' parents or caregivers, and enhance students' educational experiences (Procidano & Fisher, 1992).

Scope of the Study

Major participants of this study were students in grades 7 through 9 at junior

high schools in the Hsinchu City, Taiwan. Students at these levels were chosen to be participants because I believed that it would be easier to assess differences among adolescent children given their relatively well developed communication skills, as compared with younger children. Hsinchu City was chosen as the site for this study because I am familiar with the area and thought I would have a better chance of gaining access to participants than would have been possible in less familiar areas. Furthermore, practical, non-financial assistance for this study was available from the Bureau of Education and Department of Social Affairs of Hsinchu City Government because I work as an official in the Hsinchu City Government. Finally, the population of Hsinchu City was a good subject for studying Taiwan's children in different family types, including grandparenting families, because the aging population in Hsinchu City is very large, and the number of junior high students is also sufficient to provide adequate numbers of participants for this study. The distribution of population aged 0-11, 12-17, and over 65 in Hsinchu City and Taiwan is displayed in Table 1.

Table 1

The Distribution of Population in Hsinchu City & Taiwan

Area	Age		
	0-11 Y	12-17Y	↑ 65Y
Hsinchu City	65,359	34,392	35,391
	(16.65%)	(8.76%)	(9.01%)
	3,230,579	1,938,854	2,238,499
Taiwan	(14.21%)	(8.53%)	(9.85%)

Note. From *Office of auditing: The statistical abstract of Hsinchu City, 2004*, by Hsinchu City Government, Taiwan, 2005, retrieved July 24, 2006, from URL: http://dep-auditing.hccg.gov.tw/web66/_file/2197/cache/web/SELPAGE/22517/nullnullnull_zh_TW.html.

From *Office of auditing: The statistical quarter book of Hsinchu City, the first quarter of 2006*, by Hsinchu City Government, Taiwan, 2006, retrieved July 24, 2006, from URL: <http://www.ris.gov.tw/ch4/static/st1-1.html>. and <http://www.ris.gov.tw/ch4/static/st1-9.html>.

From *National statistics of 2004*, by Directorate General of Budget, Accounting and Statistics, Executive Yuan, Taiwan, 2005, retrieved July 24, 2006, from URL : <http://61.60.106.82/pxweb/database/CountyStatistics/CountyStatistics.htm>

The number of junior high schools, the average number of students at a school, and the average number of students in a class in Hsinchu City is displayed in Table 2.

Table 2

The Number of Junior High School Students in Hsinchu City

Area	Item		
	The total number of junior high schools	The average number of students at a school	The average number of students at a class
Hsinchu City	10	1,737	34.5

Note. From *Office of auditing: The statistics of Hsinchu City.*, by Hsinchu City Government, Taiwan, 2006.

Relevant Terms

The following terms have been defined for the purpose of this study:

Family: This term is defined as two or more people, related by birth, marriage, or adoption and residing together (Ray, 2005).

Grandparenting Family: This term is defined as a family in which one or both grandparents rear grandchildren independently on a full-time basis (Huang, 2003). In other words, grandparents are (or one grandparent is) the primary caregivers/custodians. In this study, if one or both of the grandparents head an extended family, it is also a grandparenting family.

Single-Parent Family: This term is defined as a family in which man or woman raises his or her children alone, without the presence of a second parent or a parent substitute (Procidano & Fisher, 1992; Weiss, 1979). In other words, one of the parents is the primary caregiver/custodian. In this study, if an extended family is headed by one of the parents, it is also defined as a single-parent family.

Two-Parent Family: For the purpose of this study, this term is defined as a family in which both parents rear children on a full-time basis (Huang, 2003). In other words, parents are the primary caregivers/custodians. In this study, this term includes not only the nuclear family but also an extended family headed by both parents.

Risk Behavior or Misbehavior: In addition to the Behavioral Achievement Score (BAS), which is a quantitative expression of a student's behavioral achievement at school (see Table3: The Criteria used to determine students' BAS), those risk behaviors included in the Middle School Youth Risk Behavior Survey (YRBS) by the Centers for Disease Control and Prevention (CDC) are those that contribute to six major

categories of: physical activity, nutrition, tobacco use, alcohol and other drug use, violence and injuries, and sexual behaviors (Centers for Disease Control and Prevention, 2007). For the purpose of this study, this term is defined as those behaviors regarding tobacco use, alcohol drinking, drug and substance use, sexual intercourse, violence and injuries, and attempted suicides. Those behaviors were investigated by self-reporting of past and present intentions, experiences, and practices of tobacco use, alcohol drinking, drug and substance use, sexual intercourse, violence and injuries, and attempted suicides among junior- high-student participants.

Table 3
The Criteria Used to Determine Students' BAS

BAS	Criteria		
	Specific		Evaluation by the
(100%)	Achievements or	Presence	Home-Room Teacher
%	Services		
	30	40	30

Note. From *Student Affairs Office*, by Chien-Hua Junior High School, Taiwan, 2007, retrieved Nov 27, 2007, from URL: <http://163.19.104.19/newschool/>.

CHAPTER II

REVIEW OF THE LITERATURE

The main purpose of this chapter is to provide results of past studies which suggested those characteristics, such as the ethnicity of caregivers/custodians, family income, the educational level of caregivers /custodians, the academic achievement, the behavioral achievement, and the misbehavior of children, that may be related to the type of family in which children are raised.

Ethnicity

According to a report in a national newspaper in Taiwan, it was estimated that 70% of first- to ninth- grade students were being raised in grandparenting families in a county that consisted mainly of native Taiwanese (Lee, Chang, & Chao, 2006). It is thought that most grandparenting families consist of native Taiwanese because most native Taiwanese parents have to work outside of their hometown (Chiu, 2004). In addition, it has been estimated that the ratio of grandparenting families to parenting families is higher with grandparents from Chinese provinces and of native Taiwanese (Wu, 2006).

Family Income

According to informal investigations of grandparenting families in Taiwan, 10% of those families assisted by the Center of Taiwan Fund for Children and Families (CCF/Taiwan) are grandparenting families (Chung, 2005; *Grandparents in I-Lan County*, 2005; Lee, Chang, & Chao, 2006). Moreover, it has been estimated that grandparenting families account for 10% of low-income families in Taiwan. Fifty percent of all factors contributing to grandparenting result from the parents' economic hardships (Chung, 2005). Huang's (2002) study of fifth- to sixth-grade children being raised in grandparenting families, found that 26% of grandparents in those families had reported having economic difficulties (Huang, 2002).

The Educational Level of Caregivers/Custodians

Burnette (1997) found that 58% of grandparents had not finished high school. In addition, it was found that for most caregivers of junior-high students in juvenile houses of correction in Taiwan, caregivers' educational level ranges from illiterate to elementary-school level. This was believed to have a disadvantageous effect on the parent-child relationship (Huang, 2000). Huang's (2002) study of the fifth- to sixth-grade children raised in grandparenting families found that 70% of the

grandparents in those families fell into the educational range just mentioned. It is believed that parenting style is highly related to the educational level of parents or other family leaders (McBride-Chang & Chang, 1998). Because parenting style could affect children's academic achievement and behavioral achievement, the relationship between the educational level of parents, grandparents, caregivers or custodians, and children's academic achievement or and children's behavioral achievement is expected to be significant (Chiu, 2004).

Academic Achievement (GPA)

Most studies of children raised in grandparenting families indicate that these children have poor academic and behavioral achievement (Chen, 2000; Chiu, 2004). Wu's (1996) study comparing the academic achievements of students from Taitung County and Taipei Municipality showed lower academic achievement for native Taiwanese students. This comparatively low academic performance by members of that group was attributed to flaws in their family structure, grandparenting families being considered the least well-functioning when compared to two-parent or even single-parent families. In addition, Lai (2004) found that family structure may have a greater impact on the academic achievement of junior high students than on high

school students. Hu (2004) found that grandparenting families are disadvantageous to grandchildren's academic achievement, social relationship and self-concept. In a qualitative study on 17 adolescent students from grandparenting families in Taiwan, it was found that youths' academic achievement is low because grandparents cannot give grandchildren practical help (Li, 2006).

Edwards and Daire (2006) found that, in American, few studies have investigated the functioning of children raised exclusively by their grandparents. However, Sawyer and Dubowitz's (1994) study, utilizing a large sample of low-income families, found that children raised by relatives other than parents display lower academic scores when compared to peers. Two other empirical studies available in the literature that exclusively investigate children raised by their grandparents suggest that these children function similarly to children raised in other alternate family types (Harrison et al., 2000; Solomon & Marx, 1995). But Solomon and Marx (1995) also found that the most significant school-related problem for children raised by their grandparents is that they might experience academic problems, and children raised by their grandparents tend to have poorer academic achievement than children raised in other types of families.

Behavioral Achievement (BAS) & Misbehavior

As mentioned above, most studies of children raised in grandparenting families indicate that these children have poor behavioral achievement (Chen, 2000; Chiu, 2004). According to the statistics from Judicial Yuan, Taiwan, in 2000, 59.32% of misbehaving young adolescents were raised in nuclear families, 19.57% in single-parent families, 12.36% in extended families, and 3.87% of misbehaving young adolescents were raised in grandparenting families (Tsai, 2003). In addition, it was found in Tsai's (2003) study on 1,147 junior-high-school students, that students raised in grandparenting families have more juvenile delinquencies than students from single-parent or two-parent families. Kuo's (2006) study on the association between family type and adolescent's cigarette smoking and alcohol drinking found that the family type with grandparenting is an important factor influencing adolescent's cigarette smoking and alcohol drinking. Huang's (2000) study found that children raised in grandparenting families tend to drop out of schools and to pilfer, which result from poor communications between grandparents and grandchildren, and grandchildren's lack of role identities of being raised by grandparents. In another study that analyzed multiple factors influencing violent behavior among private

vocational high school students in Taiwan, it was found that family type is significantly correlated with the frequency of violent behavior in this group (Chi, 2005). In Chang's (2005) qualitative study on 20 junior-high-school students from grandparenting families, it was found that grandparenting children may lack the urge to study. However, they do not necessarily misbehave.

Grandparenting

The role of grandparents in many countries is changing. In recent years, increasing numbers of grandparents have found themselves responsible for raising their grandchildren (Chiu, 2004). According to the statistics in Taiwan, between 1995 and 2000, the number of nuclear families decreased 5.2%, and the number of extended families decreased 1.7%. However, single-parent families and grandparenting families increased 1.1% and 0.3%, respectively (Huang, 2002). It was also estimated that grandparenting families comprised about 1% of all families in 2000, while, in 2002, an estimated 11.87% of elementary school children were raised by a single-parent or grandparent in Taiwan (Liu, 2003).

A widely used definition of "grandparenting family" is a family in which one or both grandparents rear grandchildren independently, on a full-time basis, when the

children's parents cannot assume parental responsibilities (Huang, 2003). In other words, grandparents who take the custodial responsibility for grandchildren are the main sources of family incomes, and constitute the families of grandparenting with their grandchildren (Huang, 2003; Liu 2003).

Strengths and Negative Effects of Grandparenting

Chiu's (2004) case study of the strengths of grandparenting in Taiwan suggests that grandparenting could be a good substitute for absent or dysfunctional parents, provide steady financial support, pass on family values, complete biological generations of a family, create close bonds between generations in a family, and strengthen ties to communities. In addition, grandparents may aid the transmission of languages or cultures in a Chinese society. Yet most studies have focused on the negative effects of grandparenting for grandchildren (Wu, 2006). Economic hardships may be worse when grandparents lack good jobs. Not all grandparents can have much involvement in the transmission of own cultures due to pressures that limit time spent between grandparents and grandchildren (Wu, 2006). In Taiwan, as noted previously, about 10% of families in poverty assisted by the Centers of Taiwan Fund for Children and Families are headed by grandparents (Chung, 2005; *Grandparents in*

I-Lan County, 2005; Lee, Chang, & Chao, 2006). Many students in grandparenting families have low academic achievement and may misbehave because they lack appropriate guidance from grandparents (Chung, 2005). It has been thought that the negative effects of grandparenting on grandchildren's education may surface in children's physical, emotional or behavioral problems (Lin, 2000).

Dimensions of the Grandparental Role

In Chinese societies, older people are not expected to work as hard as they did when they were young. Yet elders are valued for their knowledge; it is often only they who understand traditions and can pass them down to future generations (Lakin, 1999). In other words, the elderly in Chinese cultures are considered the guardians and transmitters of social values (Lakin, 1999).

The grandparent role has been termed a "roleless role," meaning that grandparents do not have the same rights and obligations as parents (Clavan, 1978). Still, many studies conclude that grandparents play an important part in grandchildren's lives. Grandparents are thought to provide emotional satisfaction (to be fun-seekers and playmates of grandchildren), biological renewal and continuity, and social continuity (grandparents as a reservoir of family wisdom and values).

Grandparents are valued for their sociological functions in the family. They are a source of assistance and affection to parents and children and provide a sense of family unity. They are also valued as transmitters of family and cultural history (Strauss, 1996). In a study exploring the grandparent–grandchild relationship, it was found that grandparents’ role as the transmitter of family history is perceived as the most important one, and sharing oral history is considered an important communicative activity between grandparent and grandchild (Down, 1988). It has been found that grandparents provide a link with the past, offer grandchildren a sense of family continuity, and may be children’s first contact with dying and death (Kalish, 1969). In short, some of the roles or functions grandparents may perform for grandchildren are: teacher, family historian, mediator and confidant, nurturer and caretaker (“Strengthening the grandparent-grandchild relationship,” 1983).

Summary

To sum up, the limited literature on family types and children’s characteristics suggests that characteristics such as caregivers’/custodian’s ethnicity, family income, the educational level of caregivers/custodians, children’s academic achievement, behavioral achievement, and children’s misbehavior, are significantly related to the

type of family in which children are raised.

CHAPTER III

METHODOLOGY

The current study was designed to investigate characteristics of children raised in three family types in Taiwan. This chapter describes the methodology that was used to conduct the study. This chapter presents detailed descriptions of the following: a) research design, b) research questions, c) assumptions, d) procedures, e) instrument/questionnaire, f) internal and external validity, g) ethical considerations, h) pilot study, i) participants/ data collection, j) data analysis, and k) major limitations.

Research Design

The data for this study were collected through a self-reporting questionnaire administered to junior high school students in the Hsinchu City. Statistical software, the Statistical Package for the Social Sciences (SPSS) 13th edition, was used to analyze the collected data. First, the demographic questions of the questionnaire, which include items such as the ethnicity of caregivers/custodians , family income, caregivers'/custodians' educational level, students' GPA, and students' Behavioral Achievement Score (BAS), were used to collect students' information as dependent variables. In addition, each student answered a question related to his or her present

family type, which was categorized as the independent variable of this study. The remaining questions in the questionnaire were about risk behaviors, which were selected from “Middle School Youth Risk Behavior Survey,” (Centers for Disease Control and Prevention, 2007) and included items regarding students’ past and present experience in six categories of risk behaviors: tobacco use, alcohol drinking, drug or substance use, sexual intercourse, violence-related behavior, and attempted suicide. The responses to these questions were analyzed as the outputs of dependent variables.

Research Questions

This study was guided by the following research questions:

Research Question # 1

How do factors including caregivers’/custodians’ ethnicity, family income, caregivers’/custodians’ educational level, academic achievement (GPA), behavioral achievement (BAS), risk behaviors (including tobacco use, alcohol drinking, drug use, sexual behavior, violent behavior, and attempted suicide) differ according to the type of family in which students are raised: two-parent, single-parent, or grandparenting?

Research Question # 2

What are the correlations between dependent variables, such as between

students' family income and academic achievement score (GPA), between family income and behavioral achievement score (BAS), between caregivers'/custodians' educational level and academic achievement score (GPA), and between caregivers'/custodians' educational level and behavioral achievement score (BAS)?

Assumptions

Before this study had formally begun, the following assumptions and decisions were made:

1. The questionnaire used in this study is of high validity and is reliable to provide accurate information from participants.
2. All participants in this study would understand the questions on the questionnaire and would respond honestly and authentically.
3. All participants would be assessed with the same procedures and routines.
4. All participants' responses would be translated from Chinese into English without significant loss of meaning.

The Major Research Framework

The main framework of this study, which indicates the relationship between independent variables and dependent variables, is displayed in Table 4 (see Table 4, below).

Procedures

This study was organized in five steps:

1. Apply for and receive approval of the study by the Human Subjects Committee-Lawrence (HSCL) at the University of Kansas.
2. Conduct the pilot study in order to decide the Chinese questionnaire.
3. Recruit participants from junior high schools and institutions of social welfare in Hsinchu City.
4. Collect the data from participants.
5. Analyze the data by SPSS and interpret the results.

Table 4

The Major Research Framework

Dependent Variable	Independent Variable		
	Two-Parent Family	Single-Parent Family	Grandparenting Family
Caregivers'/Custodians'			
Ethnicity			
Students'			
Family Income			
Caregivers'/Custodians'			
Educational Level			
Students' GPA			
Students' BAS			
Students' Tobacco Use			
Students' Alcohol Drinking			
Students' Drug or Substance Use			
Students' Sexual Intercourse			
Students' Violence-Related Behavior			
Students' Behavior of Attempted Suicide			

Instrument/Questionnaire

A 34-item, self-reporting questionnaire (see Appendices A and B) was used in this study; the questionnaire consisted of 12 demographic questions and 22 questions related to students' past and present experience of risk behaviors. The demographic questions asked for the students' grade, age, gender, and also inquired into caregivers'/custodians' ethnicity, family income, caregivers'/custodians' educational level, the students' GPA, and Behavioral Achievement Score (BAS). In addition, each participant was asked to answer the question related to his or her family type. The questions about risk behaviors, which were selected from "Middle School Youth Risk Behavior Survey," (Centers for Disease Control and Prevention, 2007) include items regarding tobacco use, alcohol drinking, drug and substance use, sexual intercourse, violence-related behavior, and attempted suicide. The six aspects of risk behaviors that were included in this questionnaire had been confirmed by the Department of Elementary Education, Ministry of Education in Taiwan, as questions that were permissible to ask of junior high students. The subjects' responses to these 22 questions were collected and analyzed as dependent variables and presented as parts of the characteristics of children raised in the three family types.

Internal and External Validity

A pilot survey of fifteen students was conducted to increase the internal validity of the questionnaire for this study. If, during the pilot study, any questions were found to be inappropriate or too hard for junior high school students to answer, they would be deleted or modified. Through the pilot survey, I also ascertained whether junior high school students have sufficient knowledge of their families (e.g. family income, their caregivers' ethnicity, etc.) to be able to answer questions about these matters.

I set up the following comprehensive counseling plan for those students who came forward or otherwise identified themselves as being in danger or as feeling distress in light of the questionnaire:

1. Students were informed that they would be welcome to visit the counseling center at any time. The counselors and counseling teachers had been informed of the content of this study and been told that there might be students who decided to visit the center because of answering the study questionnaire.
2. After receiving all finished questionnaires and completing the analysis, I would give the statistical results to the Academic Division and the Counseling Center of each participating school. Because the Academic Division and the

Counseling Center helped me select which classes of students at each school would complete the questionnaires, if there had been students who reported engaging in risky behaviors, the Academic Division and the Counseling Center should at least know which classes these students are in. This would enable the Counseling Center to communicate with the home-room teachers in these classes and to remind any students who might feel the need for counseling or other help to seek advice through the Counseling Center as soon as possible. Furthermore, because the statistical results had been given to the Academic Division and the Counseling Center of each participating school, I believed that the counseling endeavor would be reinforced for those students in danger in the future.

Ethical Considerations

First, application was made to the Human Subjects Committee-Lawrence (HSCL) at the University of Kansas for approval of the study so that permission to use the Chinese version of the questionnaire could be obtained (Approved: HSCL#16848; See Appendix C). Although there were no anticipated physical risks associated with this study, some participants could feel psychological stress when

responding to the questionnaire because of the nature of some questions, especially those related to risk behaviors. A note at the beginning of the questionnaire indicated that the participant could elect not to answer any specific question if he or she preferred not to or felt uncomfortable with for any reason.

A copy of the “Information Statement for Caregivers/Custodians” (see Appendix D and E) and the “Information Statement for Students” (see Appendix F and G) were prepared for participants as consent forms. In addition, an empty envelope, which could be sealed after the questionnaire was completed, was given to each participant. Finally, in order to protect the privacy of the participant, to elicit truthful answers from students, and to encourage participation in this study, a sample number instead of the student’s name was used to identify each sample, and students were asked not to write their names on the questionnaire. In this way, the questionnaires were completely and absolutely anonymous. Consequently and unfortunately, there was no way to determine which individual students might be in danger from engaging in risky behaviors. However, as I indicated on the Information Statement, if any student felt upset or concerned after finishing the questionnaire, the student was informed that he or she could visit the counseling center of the school to

seek support or help.

Pilot Study

In order to increase the internal validity of this study, a pilot study was conducted before the questionnaires were formally disseminated. The pilot study was the same as the main study with respect to procedures and Informed Consent. Fifteen students of Chien-Hua Junior High School were recruited because this study was highly supported by the Dean of the Academic Division. After the consent forms of fifteen students were received, the questionnaires, with two extra questions, were given to these 15 students to finish during a break between classes on a weekday. The two extra questions were:

1. Is there any question that you feel too hard to read or understand? Or you strongly feel not to answer? (Please indicate Q#_____, the reason is:_____).
2. Do you have any other comments and suggestions to this questionnaire?

Those 15 junior high students included 9 female and 6 male students. Their average age was 15.13 years old. 11 students were from two-parent families, 3 were from single-parent families, and 1 was from a grandparenting family. The only

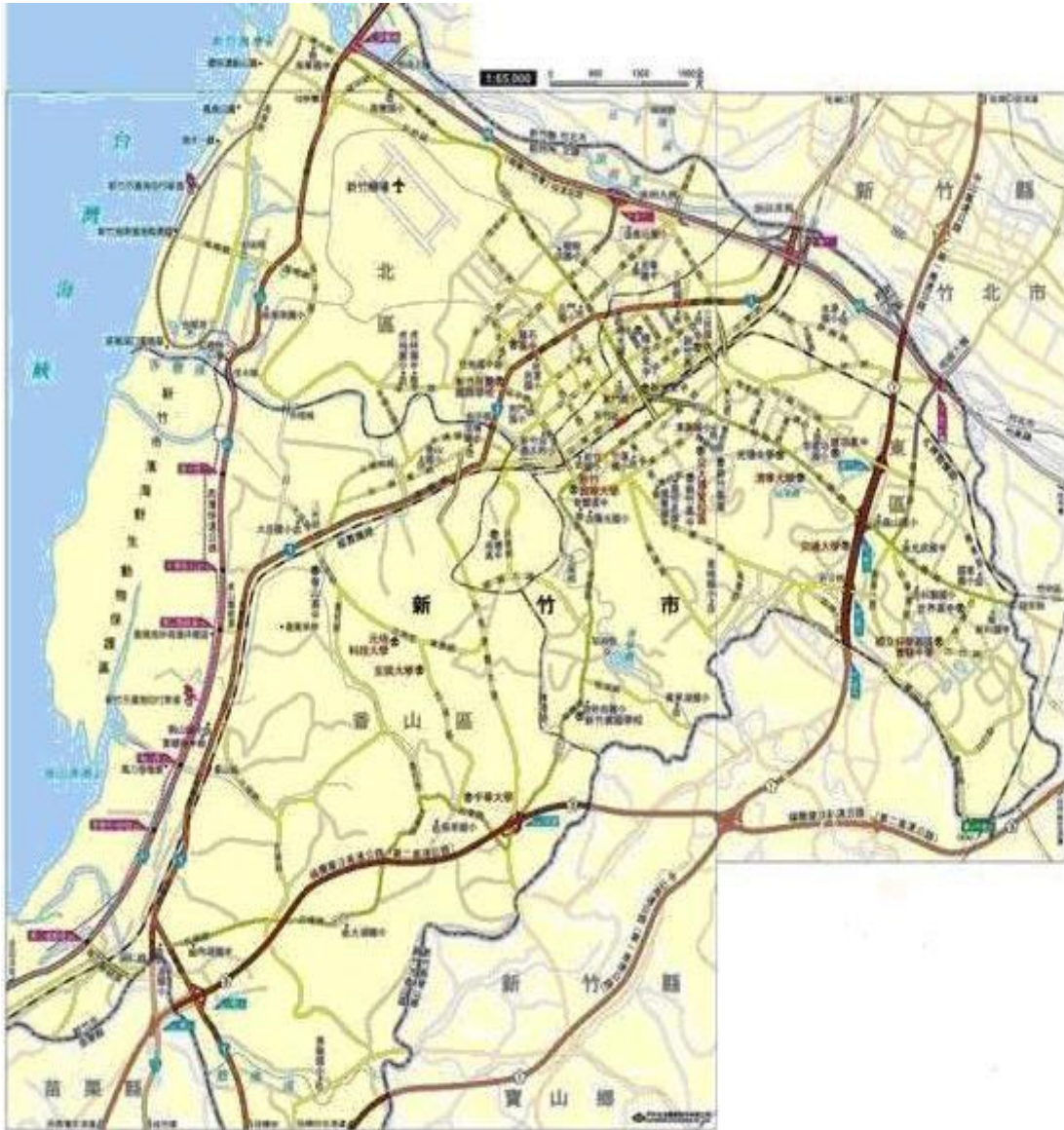
impressive response to question 1 was “no money to use marijuana!” Most questionnaires were completely answered with no blanks.

Participants/Data Collection

Subjects of this study consisted of a total of 150 male and female students (69 male students and 81 female students) in the seventh to ninth grade from five junior high schools (Chien-Kung Junior High School, San-Min Junior High School, Chien-Hua Junior High School, Hu-Lin Junior High School, and Nan-Hua Junior High School) and the Hsinchu Family Helper Project Center of Taiwan Fund for Children and Families (CCF/Taiwan) in the Hsinchu Area, Taiwan. This meant that participants came from two junior high schools in the northern district of Hsinchu City, three junior high schools in the eastern district of Hsinchu City, and one of the major institutions of social welfare in Hsinchu City (See Fig1: The Location Map of Schools in Hsinchu City, Taiwan, below).

Figure 1

The Location Map of Schools in Hsinchu City, Taiwan



Note. From Civil Affairs Bureau: *The Location Map of Schools in Hsinchu City*, by Hsinchu City Government, Taiwan, 2007, retrieved Oct 31, 2007, from URL: http://www.hccg.gov.tw/web66/_file/1852/upload/hsinchu_atlas/html/112-113.html.

In order to maintain a sample size of 50 students from each of the three family types, a purposive sample was used for this study. This meant that subjects from two-parent and single-parent families could be recruited and sampled mainly from junior high schools in the Hsinchu City. However, because of an inadequate number of subjects by purposive sampling from the five junior high schools, subjects from grandparenting families were recruited not only from junior high schools but also from Hsinchu Family Helper Project Center of Taiwan Fund for Children and Families (CCF/Taiwan). The process of recruiting subjects included the following steps:

1. Information was acquired from the district school supervisors at the Bureau of Education, Hsinchu City Government, and five junior high schools were selected, including Chien-Kung Junior High School, San-Min Junior High School, Chien-Hua Junior High School, Hu-Lin Junior High School, and Nan-Hua Junior High School, which had a higher rate of students from single-parent or grandparenting families and also had a high consent rate for participation in this study in Hsinchu City.
2. The Dean of the Academic Division and the Dean of Counseling at each of the

five junior high schools were contacted. They were asked to select two to four classes of students at each school to complete the questionnaires. When participants had been chosen, I went to each school and distributed the consent forms and surveys to participating students and explained how to fill out the questionnaires.

3. After students finished the questionnaires, I collected them (in the anonymously sealed prepared empty envelopes). I sampled fifty copies of completed questionnaires finished by students from two-parent and fifty copies from single-parent families. Besides, I also selected those questionnaires completed by students from grandparenting families.
4. Finally, the Director of Hsinchu Family Helper Project Center of Taiwan Fund for Children and Families (CCF/Taiwan) was contacted to help recruit an adequate sample of subjects from grandparenting families. The Director and I recruited the participants during a weekend entertainment camp held for junior high students from the center's participating families.

Data Analysis

Upon completion of data collection, data were entered into the Statistical Package for the Social Sciences (SPSS) 13th edition to acquire the descriptive statistics and inferential results of this study.

Fisher's Exact Test and Chi-Square Test were used for testing the difference in the dependent variables among the three family types. The Spearman's Rank-order Correlation Test was used to identify significant correlations between dependent variables. A .05 level of significance has been used for all statistical procedures in this study.

Major Limitations

The major limitations in the method include the following:

1. The generalizability of results: Due to the intentional selectivity and purposive sampling of participants from the three family types in this study, the results of this study have limited generalizability to the population. However, it is anticipated that the findings of this study would be comparable to those from similarly systematic studies of such family types.
2. Loss of meaning occurring through translation between two languages: The

major questionnaire used in this study was a Chinese edition. In order to lessen any potential loss of meaning, great care was taken in translating the questionnaire and participants' responses into English.

3. Correlational studies are not capable of establishing cause-effect relationships:

This study is a correlational study testing the relationships between variables, so I cannot affirm that a cause-effect relationship exists between different dependent variables and family types.

4. Not able to analyze and compare results from a longitudinal time frame: This

study is a survey study that investigates the present status of students and their families. The influence of family types originating from the length of time that children are raised by caregivers/custodians was not assessed.

Summary

The overarching purpose of this study is to explore certain characteristics of children raised in three family types in Taiwan: two-parent, single-parent, and grandparenting. In this chapter, the research methods and strategies used to conduct this investigation are addressed. In addition, the data collection and analysis methods used are described.

CHAPTER IV

RESULTS

A purposive sampling was conducted to maintain an equal sample size of 50 junior high students in three family types: two-parent, single-parent and grandparenting; the subjects of this study consisted of a total of 150 male and female students who were selected according to their family type. These students were in the seventh to ninth grades of the junior high schools and Hsinchu Family Helper Project Center of Taiwan Fund for Children and Families (CCF/Taiwan) in the Hsinchu City, Taiwan. After questionnaires were collected, the Statistical Package for the Social Sciences (SPSS), 13th Edition, was used for data management and analysis. Each questionnaire was given a sample number based on the family type. Numbers 101-150 were used for single-parent families, 201-250 for grandparenting families, and 301-350 for two-parent families.

Descriptive Results

Primary Caregivers and Family Type

Table 5, below, illustrates the number of different types of primary caregivers in different types of families. In other words, this table is presented according to the independent variable-- family type--and the answers of primary caregivers/custodians originated from the fourth question of the major questionnaire.

Table 5

Number of Different Types of Primary Caregivers in Different Types of Families

		Primary Caregiver/ Custodian					Total
		Both parents	One parent	Paternal grandparents or One grandparent	Maternal grandparents or One grandparent	Other	
Family Type	Two- Parent	50					50
	Single- Parent		49			1	50
	Grand- parenting			41	6	3	50

Demographic Characteristics of Participants

The descriptive results of all dependent variables are displayed as a frequency distribution in Table 6.

Table 6

Demographic characteristics of participants (N = 150)

Characteristic		n	%
Grade			
	7	70	46.7
	8	66	44.0
	9	14	9.3
Age			
	12	3	2.0
	13	47	31.3
	14	73	48.7
	15	22	14.7
	16	5	3.3
Gender			
	Male	69	46.0
	Female	81	54.0
Primary caregiver/custodian			
	Both parents	50	33.3
	One parent	49	32.7
	Paternal grandparents or one grandparent	41	27.3

Characteristic	n	%
Maternal grandparents or one grandparent	6	4.0
Other	4	2.7
How long have you lived with your primary caregiver/custodian		
Since my birth	135	90.0
Other	15	10.0
The educational level of the primary caregiver/custodian		
Graduate school degree	4	2.7
College or university degree	19	12.7
High school graduate	53	35.3
Junior high school graduate	47	31.3
Elementary school graduate	20	13.3
Illiteracy	3	2.0
Don't know	3	2.0
Blank	1	0.7
Is the primary caregiver/custodian working		
Yes	115	76.7
No	35	23.3

Characteristic	n	%
The main reason of grandparenting		
Parents are working outside of the home or howntown	40	26.7
Parents are divorced	29	19.3
Parents have passed away (both or one of them)	15	10.0
Mother is unmarried	1	0.7
Other	65	43.3
Father's ethnicity		
Fukien Taiwanese	92	61.3
Hakka Taiwanese	37	24.7
China Provinces	8	5.3
Native Taiwanese	9	6.0
Other	1	0.7
Blank	3	2.0
Mother's ethnicity		
Fukien Taiwanese	96	64.0
Hakka Taiwanese	38	25.3
China Provinces	3	2.0
Native Taiwanese	10	6.7
Other	2	1.3
Blank	1	0.7
Grandfather's ethnicity		
Fukien Taiwanese	41	27.3
Hakka Taiwanese	16	10.7
China Provinces	10	6.7

Characteristic		n	%
Grandmother's ethnicity	Native Taiwanese	6	4.0
	Other	3	2.0
	Blank	74	49.3
	Fukien Taiwanese	42	28.0
	Hakka Taiwanese	20	13.3
	China Provinces	6	4.0
	Native Taiwanese	9	6.0
GPA	Other	4	2.7
	Blank	69	46.0
	90-99	17	11.3
	80-89	48	32.0
	70-79	25	16.7
	60-69	28	18.7
	< 60	32	21.3
Behavioral Achievement Score	100	2	1.3
	90-99	57	38.0
	80-89	55	36.7
	70-79	12	8.0
	60-69	12	8.0
	< 60	12	8.0

Characteristic	n	%
Family income/month (TWD)		
≤20,000	25	16.7
20,001-25,000	25	16.7
25,001-30,000	20	13.3
30,001-35,000	13	8.7
35,001-40,000	17	11.3
40,001-45,000	12	8.0
45,001-50,000	9	6.0
50,001-55,000	6	4.0
55,001-60,000	6	4.0
60,001-65,000	3	2.0
65,001-70,000	3	2.0
>70,000	11	7.3
Tobacco use		
No(Never)	108	72.0
Yes	42	28.0
Have smoked a whole cigarette		
No	116	77.3
Yes	31	20.7
Blank	3	2.0
Have ever smoked cigarettes daily		
No	140	93.3
Yes	9	6.0
Blank	1	0.7

Characteristic	n	%
Are currently smoking		
No	140	93.4
Yes	8	5.3
Blank	2	1.3
How many cigarettes are you roughly smoking per day		
1-3	4	2.7
4-6	4	2.7
7-9	1	0.7
10-12	1	0.7
> 13	1	0.7
Blank	139	92.5
Have you ever had a drink of alcohol		
No	66	44.0
Yes	83	55.3
Blank	1	0.7
Are currently drinking		
No	141	94.0
Yes	7	4.7
Blank	2	1.3
Have ever used steroid (any form)		
No	148	98.7
Yes	2	1.3
Had sexual intercourse		
No	136	90.7
Yes	5	3.3
Blank	9	6.0

Characteristic	n	%
How many persons have ever had sexual intercourse		
1	3	2.0
2	1	0.7
>= 6	1	0.7
Blank	145	96.6
Condom use		
Never had sexual intercourse	141	94.0
Yes	3	2.0
No(use)	6	4.0
Ever been in a physical fight		
No	91	60.7
Yes	59	39.3
Been in a physical fight to be hurt and had to be treated		
No	142	94.7
Yes	7	4.7
Blank	1	0.6
Have thought about killing self		
No	123	82.0
Yes	27	18.0

Characteristic		n	%
Have made a plan about committing suicide	No	133	88.7
	Yes	17	11.3
Have tried to commit suicide	No	145	96.7
	Yes	5	3.3
Currently have thoughts of committing suicide	No	140	93.3
	Yes	9	6.0
	Blank	1	0.7

Inferential Results

The research questions and their hypotheses were tested by the following statistical methods:

Method 1: Use Chi-Square Test or Fisher's Exact Test to test the relationship between caregivers'/custodians' ethnicity, family income, caregivers'/custodians' educational level, academic achievement (GPA), behavioral achievement score (BAS), risk behaviors and family type.

Research Question 1 asked, How do factors including caregivers'/custodians' ethnicity, family income, caregivers'/custodians' educational level, academic achievement (GPA), behavioral achievement (BAS), risk behaviors (including tobacco use, alcohol drinking, drug use, sexual behavior, violent behavior, and attempted suicide) differ according to the type of family in which students are raised: two-parent, single-parent, or grandparenting? The following 6 hypotheses were considered.

Hypothesis 1: Ethnicity and Family Type. The ethnicity of caregivers/custodians is significantly correlated with the type of family in which students are raised. Fisher's Exact Test, as presented in Tables 7-10, tested this null hypothesis.

Table 7

The Two-Way Contingency Table Analysis of Fathers' Ethnicity and Family Type by Fisher's Exact Test

		Family Type			Total	P-Value
		Single-Parent	Grandparenting	Two-Parent		
Fathers' Ethnicity	Fukien Taiwanese	29	26	37	92	0.322
	Hakka Taiwanese	14	14	9	37	
	China Provinces	2	5	1	8	
	Native Taiwanese	2	4	3	9	
	Other	1	0	0	1	
	Total	48	49	50	147	

Note. 9 cells with an expected frequency (**fe**) less than 5.

In Table 7, the Fisher's Exact Test is used to determine whether there is a correlation between fathers' ethnicity and family type. Under the two-tailed significance test, the p-value is equal to 0.322 and greater than 0.05 (the .05 level of significance). Therefore, fathers' ethnicity and family type are not found to be significantly related.

Table 8

*The Two-Way Contingency Table Analysis of Mothers' Ethnicity and Family Type
by Fisher's Exact Test*

		Family Type			Total	P- Value
		Single-Parent	Grandparenting	Two-Parent		
Mothers' Ethnicity	Fukien Taiwanese	29	30	37	96	0.238
	Hakka Taiwanese	17	12	9	38	
	China Provinces	0	3	0	3	
	Native Taiwanese	3	3	4	10	
	Other	1	1	0	2	
	Total	50	49	50	149	

Note. 9 cells with an expected frequency (**fe**) less than 5.

In Table 8, the Fisher's Exact Test is used to determine whether there is a correlation between mothers' ethnicity and family type. Under the two-tailed significance test, the p-value is equal to 0.238 and greater than 0.05 (the .05 level of significance). Therefore, mothers' ethnicity and family type are not found to be significantly related.

Table 9

The Two-Way Contingency Table Analysis of Grandfathers' Ethnicity and Family Type by Fisher's Exact Test

		Family Type			Total	P-value
		Single-Parent	Grandparenting	Two-Parent		
Grandfathers' Ethnicity	Fukien Taiwanese	10	22	9	41	0.246
	Hakka Taiwanese	5	10	1	16	
	China Provinces	1	9	0	10	
	Native Taiwanese	1	3	2	6	
	Other	2	1	0	3	
	Total	19	45	12	76	

Note. 10 cells with an expected frequency (**fe**) less than 5.

In Table 9, the Fisher's Exact Test is used to determine whether there is a correlation between grandfathers' ethnicity and family type. Under the two-tailed significance test, the p-value is equal to 0.246 and greater than 0.05 (the .05 level of significance). Therefore, grandfathers' ethnicity and family type are not found to be significantly related.

Table 10

The Two-Way Contingency Table Analysis of Grandmothers' Ethnicity and Family Type by Fisher's Exact Test

		Family Type				P-value
		Single-Parent	Grandparenting	Two-Parent	Total	
Grandmothers' Ethnicity	Fukien Taiwanese	11	23	8	42	0.288
	Hakka Taiwanese	6	11	3	20	
	China Provinces	0	6	0	6	
	Native Taiwanese	2	4	3	9	
	Other	3	1	0	4	
	Total	22	45	14	81	

Note. 9 cells with an expected frequency (**fe**) less than 5.

In Table 10, the Fisher's Exact Test is used to determine whether there is a correlation between grandmothers' ethnicity and family type. Under the two-tailed significance test, the p-value is equal to 0.288 and greater than 0.05 (the .05 level of significance). Therefore, grandmothers' ethnicity and family type are not found to be significantly related.

Statistical Conclusion. There is no statistical evidence to suggest that the ethnicity of caregivers/custodians and students' family types are significantly related.

Hypothesis 2: Family Income and Family Type. There is a significant difference in family income among two-parent families, single-parent families, and grandparenting families. This hypothesis was tested by Chi-Square Test presented in Table 11 and 12, below.

In Table 11, the Chi-Square Test was used to determine whether there is a difference in family income among three family types. Under the two-tailed significance test, χ^2 is equal to 41.54, and the p-value is equal to $0.007 < 0.05$ (the .05 level of significance), so there is evidence to suggest that family income and family type are related. However, there are 24 cells with an expected frequency (**fe**) less than 5 in Table 11. In order to decrease the error of the result by the chi-square test --because there are too many cells with an expected frequency (**fe**) less than 5--12 groups of the family income in Table 11 are changed to five groups: (a) Family Income/Month < 20,000; (b) Family Income/Month=20,001-25,000; (c) Family Income/Month=25,001-35,000; (d) Family Income/Month=35,001-45,000; (e) Family Income/Month > 45,000, as displayed in Table 12.

Table 11

The Chi-Square Test of Family Income and Family Type (I)

		Family Type				χ^2 - value	P- Value
		Single-Parent	Grandparenting	Two-Parent	Total		
Family Income/Month (TWD)	< 20,000	10	11	4	25	41.54	0.007**
	20,001-25,000	13	11	1	25		
	25,001-30,000	9	6	5	20		
	30,001-35,000	3	3	7	13		
	35,001-40,000	7	6	4	17		
	40,001-45,000	3	1	8	12		
	45,001-50,000	1	4	4	9		
	50,001-55,000	1	3	2	6		
	55,001-60,000	1	1	4	6		
	60,001-65,000	1	1	1	3		
	65,001-70,000	0	0	3	3		
	> 70,000	1	3	7	11		
	Total	50	50	50	150		

Note. 24 cells with an expected frequency (**fe**) less than 5. ** P < .01.

Table 12

The Chi-Square Test of Family Income and Family Type (II)

		Family Type				χ^2 - value	P- Value
		Single-Parent	Grandparenting	Two-Parent	Total		
Family Income/Month (TWD)	< 20,000	10	11	4	25	25.37	0.001**
	20,001-25,000	13	11	1	25		
	25,001-35,000	12	9	12	33		
	35,001-45,000	10	7	12	29		
	> 45,000	5	12	21	38		
	Total	50	50	50	150		

Note. 0 cell with an expected frequency (**fe**) less than 5. ** P < .01.

In Table 12, the chi-square test is used to determine whether there is a difference in family income among three family types once again for a correct result. Under the two-tailed significance test, χ^2 is equal to 25.37 and the p-value is equal to $0.001 < 0.05$ (the .05 level of significance), so there is evidence to suggest that family income and family type are related. Besides, the p-value would be equal to $.000 < 0.05$ if Fisher's Exact Test was used. Furthermore, the average family income

per month of the two-parent families is significantly greater than that of the single-parent families or grandparenting families, as can be seen by analyzing Table 11 or Table 12.

Statistical Conclusion. There is statistical evidence to suggest that students' family income and students' family type are significantly related. In other words, there is a significant difference in the family income among two-parent families, single-parent families, and grandparenting families.

Hypothesis 3: Caregivers'/Custodians' Educational Level and Family Type.

There is a significant difference in caregivers'/custodians' educational level between two-parent families, single-parent families, and grandparenting families. This hypothesis was tested by Chi-Square Test, as presented in Table 13 and 14, below.

Table 13 indicates the original frequency distribution of caregivers'/custodians' educational level among three types of families. When the chi-square test was used to test this table, there were 10 cells with an expected frequency (**fe**) less than 5. In order to decrease the error of the results by the chi-square test--because there are too many cells with an expected frequency (**fe**) less than 5 in Table 13-- the original 7 groups of the caregivers'/custodians' educational level in Table 13 are changed to four groups as

displayed in Table 14: (a) The caregivers'/custodians' educational level are above college or university degree (including college or university degree and graduate school degree); (b) The caregivers'/custodians' educational level are high school graduates; (c) The caregivers'/custodians' educational level are junior high school graduates; (d) The caregivers'/custodians' educational level are elementary school graduates or illiteracy.

Table 13

The Two-Way Contingency Table Analysis of Caregivers'/Custodians' Educational Level and Family Type

		Family Type			
		Single-Parent	Grandparenting	Two-Parent	Total
Caregivers'/ Custodians' Educational Level	Graduate School Degree	0	1	3	4
	College or University Degree	1	5	13	19
	High School Graduate	16	21	16	53
	Junior High School Graduate	21	14	12	47
	Elementary School Graduate	9	7	4	20
	Illiteracy	2	1	0	3
	Don't know	0	1	2	3
	Total	49	50	50	149

Note. 10 cells with an expected frequency (**fe**) less than 5.

Table 14

The Chi-Square Test of Caregivers'/Custodians' Educational Level and Family Type

		Family Type			Total	χ^2 - value	P- Value
		Single-Parent	Grandparent- ing	Two-Parent			
Caregivers'/ Custodians' Educational Level	Above College or University Degree	1	6	16	23	22.31	0.001**
	High School Graduate	16	21	16	53		
	Junior High School	21	14	12	47		
	Graduate Elementary School	11	8	4	23		
	Graduate or Illiteracy						
	Total	49	49	48	146		

Note. 0 cell with an expected frequency (**fe**) less than 5. ** P < .01.

In Table 14, the chi-square test is used to determine whether there is a difference in caregivers'/custodians' educational level among three family types once again for a correct result. Under the two-tailed significance test, χ^2 is equal to 22.31 and the p-value is equal to $0.001 < 0.05$ (the .05 level of significance). So caregivers'/custodians' educational level and the family type are found to be significantly related.

Statistical Conclusion. There is evidence to suggest that the caregivers'/custodians' educational level and students' family type are significantly related.

Hypothesis 4: Academic Achievement (GPA) and Family Type. There is a significant difference in GPA among those students raised in two-parent families, single-parent families, or grandparenting families. This hypothesis was tested by the Chi-Square Test, as presented in Table 15.

Table 15

The Chi-Square Test Table of GPA and Family Type

		Family Type				χ^2 - value	P- value
		Single-Parent	Grandparenting	Two-Parent	Total		
GPA	90-100	3	4	10	17	12.97	0.113
	80-89	18	14	16	48		
	70-79	11	8	6	25		
	60-69	8	8	12	28		
	< 60	10	16	6	32		
	Total	50	50	50	150		

Note. 0 cell with an expected frequency (**fe**) less than 5.

Statistical Conclusion. By using the chi-square test in Table 15, it is given that

$\chi^2=12.97$, $p=0.113>0.05$ (the .05 level of significance) , so it suggests that students'

GPA and students' family type are not significantly related.

Hypothesis 5: Behavioral Achievement Score (BAS) and Family Type. There is a significant difference in the Behavioral Achievement Score (BAS) between those students raised in two-parent families, single-parent families, or grandparenting

families. This hypothesis was tested by Fisher's Exact Test, as presented in Table 16 and 17, below.

In Table 16, the Fisher's Exact Test was used to determine whether there is a significant difference in the Behavioral Achievement Score (BAS) between those students raised in three family types. Under the two-tailed significance test, the p-value is equal to 0.059 and greater than 0.05 (the .05 level of significance), so there is no statistical evidence to suggest that students' Behavioral Achievement Score (BAS) and family type are significantly related. However, once the group "BAS=100" is combined with the group "BAS=90-99" into a new group "BAS=90-100" as displayed in Table 17, it is found that $p=0.046 < 0.05$ (the .05 level of significance). Under such a condition, there is statistical evidence to suggest that students' Behavioral Achievement Score (BAS) and family types are significantly related.

Table 16

The Two-Way Contingency Table Analysis of BAS and Family Type by Fisher's Exact Test (I)

		Family Type			Total	P-value
		Single-Parent	Grandparenting	Two-Parent		
BAS	100	1	0	1	2	0.059
	90-99	16	16	25	57	
	80-89	21	19	15	55	
	70-79	3	2	7	12	
	60-69	5	6	1	12	
	< 60	4	7	1	12	
	Total	50	50	50	150	

Note. 12 cells with an expected frequency (**fe**) less than 5.

By Fisher's Exact Test

Table 17

The Two-Way Contingency Table Analysis of BAS and Family Type by Fisher's Exact Test (II)

		Family Type			Total	P-value
		Single-Parent	Grandparenting	Two-Parent		
BAS	90-100	17	16	26	59	0.046*
	80-89	21	19	15	55	
	70-79	3	2	7	12	
	60-69	5	6	1	12	
	< 60	4	7	1	12	
	Total	50	50	50	150	

Note. 9 cells with an expected frequency (**fe**) less than 5. * $P < .05$.

By Fisher's Exact Test

Statistical Conclusion. There is no statistical evidence to suggest that students' Behavioral Achievement Score (BAS) and family type are significantly related when the group "BAS=100" is separate from the group "BAS=90-99". However, there is evidence to suggest that students' Behavioral Achievement Score (BAS) and family type are significantly related when the group "BAS=100" is combined with the group "BAS=90-99".

Hypothesis 6: Risk Behavior and Family Type. Students' risk behavior is significantly correlated with students' family type. This hypothesis was tested by Fisher's Exact Test and Chi-Square Test, as shown in Table 18. Fisher's Exact Test was used to test variables (factors) such as steroid use, sexual intercourse, suicide attempt, and thoughts of committing suicide because 3 cells of these variables have an expected frequency (**fe**) less than 5. Remaining variables were tested by Chi-Square Test because 0 cell of these variables has an expected frequency (**fe**) less than 5. Finally, it was found that only tobacco use and family type are significantly related ($\chi^2=13.29$, $p=0.001 < 0.01 < 0.5$, the .05 level of significance).

Statistical Conclusion. There is a statistical evidence to suggest that students' tobacco use and family type are significantly related. Other risk behaviors, such as alcohol drinking, substance or drug use, sexual intercourse, engaging in physical fights, and attempted suicide, are not significantly related with students' family type.

Table 18

Fisher's Exact Test & Chi-Square Test of Risk Behavior and Family Type

Dependent Variables		Family Type				χ^2 -value	P-Value
		Single-Parent	Grandparenting	Two-Parent	Total		
Tobacco use	No	29	34	45	108	13.29	0.001**
	Yes	21	16	5	42		
	Total	50	50	50	150		
Alcohol drinking	No	21	25	20	66	1.01	0.605
	Yes	29	25	29	83		
	Total	50	50	49	149		
Steroid use	No	49	49	50	148		1.000^a
	Yes	1	1	0	2		
	Total	50	50	50	150		
Sexual intercourse	No	46	45	45	136		0.371^a
	Yes	0	2	3	5		
	Total	46	47	48	141		
Physical fighting	No	28	31	32	91	0.73	0.695
	Yes	22	19	18	59		
	Total	50	50	50	150		
Have thought about killing self	No	41	43	39	123	1.08	0.582
	Yes	9	7	11	27		
	Total	50	50	50	150		

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Have made a plan about committing suicide	No	45	45	43	133	0.531	0.767
	Yes	5	5	7	17		
	Total	50	50	50	150		
Have tried to commit suicide	No	48	48	49	145		1.000^a
	Yes	2	2	1	5		
	Total	50	50	50	150		
Currently have thoughts of committing suicide	No	45	48	47	140		0.509^a
	Yes	5	2	2	9		
	Total	50	50	49	149		
<hr/>							

Note. ^a Fisher's Exact Test was used because 3 cells (50.0%) have an expected frequency (**fe**) less than 5. ** P < .01.

Method 2: Use Spearman's Rank-order Correlation Test to test the relationship between family income and GPA, family income and BAS, caregivers'/custodians' educational level and GPA, caregivers'/custodians' educational level and BAS.

Research Question 2 asked: What are the correlations between dependent variables, such as students' family income and academic achievement score (GPA), between family income and behavioral achievement score (BAS), between caregivers'/custodians' educational level and academic achievement score (GPA), and between caregivers'/custodians' educational level and behavioral achievement score (BAS)? The following four hypotheses were considered and tested by Spearman's Rank-order Correlation Test, as shown in Table 19, below.

Hypothesis 1: Family Income and GPA. A higher level of family income is significantly correlated with students' higher GPA.

Hypothesis 2: Family Income and BAS. There is a significant correlation between family income and students' Behavioral Achievement Score (BAS).

Hypothesis 3: Caregivers'/Custodians' Educational Level and GPA. Caregivers'/custodians' educational level is significantly correlated with students' GPA.

Hypothesis 4: Caregivers'/Custodians' Educational Level and BAS.

Caregivers'/custodians' educational level is significantly correlated with students' BAS.

Statistical Conclusion. There is no evidence to suggest family income and GPA, family income and BAS, caregivers'/custodians' educational level and GPA, caregivers'/custodians' educational level and BAS are related. However, there is statistical evidence to suggest that the correlation between family income and caregivers'/custodians' educational level is medium positive ($r=0.54$, $p=0.000<0.01<0.05$). Besides, the correlation between GPA and BAS is also medium positive ($r=0.63$, $p=0.000<0.01<0.05$).

Table 19

The Spearman's Rank-order Correlation Test of Family Income, Caregivers'/Custodians' Educational Level, GPA, and BAS

		Family Income	Educational Level	GPA	BAS
Family Income	Correlation Coefficient	1	0.54	0.14	0.11
	Sig. (2-tailed)	.	0.000**	0.098	0.164
	N	150	146	150	150
Educational Level	Correlation Coefficient		1	0.11	0.14
	Sig. (2-tailed)		.	0.196	0.092
	N		146	146	146
GPA	Correlation Coefficient			1	0.63
	Sig. (2-tailed)			.	0.000**
	N			150	150
BAS	Correlation Coefficient				1
	Sig. (2-tailed)				.
	N				150

Note. ** $P < .01$, so correlation is significant at the 0.05 level (2-tailed).

Summary

Fisher's Exact Test and Chi-Square Test were used to analyze Research Question One. In addition, Spearman's Rank-order Correlation Test was used to test Research Question Two. For Research Question One, it is found that students' family income, caregivers'/custodians' educational level, students' behavioral achievement (BAS), tobacco use and family type are significantly related. For Research Question Two, it is found that family income and caregivers'/custodians' educational level, and students' GPA and BAS have a medium positive relationship.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

In this chapter, I discuss the results described in the last chapter. The results of this study are compared with those found in related literature and studies. In addition, specific implications of the findings in this study for parents/grandparents, caregivers/custodians, and professional workers in the fields of education and social welfare are described. Finally, recommendations for future research are provided.

Discussions/ Implications

This study was driven by the major research question which asked: How do factors including caregivers'/custodian's ethnicity, family income, caregivers'/custodians' educational level, academic achievement (GPA), behavioral achievement (BAS), risk behaviors (including tobacco use, alcohol drinking, drug use, sexual behavior, violent behavior, and attempted suicide) differ according to the type of family in which students raised in: two-parent, single-parent, or grandparenting? I also sought to gain insight into whether children raised in grandparenting families really have poorer outcomes on various measures than children raised in other family types.

The characteristics were included in this study because they have been found in most of the past studies to have significant relationships with the family types in which children are raised. However, after analyzing the data acquired from 150 junior-high-school students in Hsinchu City, Taiwan, some null hypotheses are supported and some are rejected.

Hypothesis 1. The ethnicity of caregivers/custodians is significantly correlated with the type of family in which students are raised.

This hypothesis is made because I am interested in finding the relationship between the ethnicity of caregivers/custodians and the type of family in which a student is raised. However, this hypothesis is rejected in this study because there is no evidence to suggest that the ethnicity of caregivers/custodians and students' family types are significantly related. However, one question which should be addressed is that no school mainly consisted of Native Taiwanese was selected as the participating school because there is no such a school in Hsinchu City. Therefore, it is expected that the result of this hypothesis would be different if schools located in the mountain areas in Taiwan were included in the study.

Hypothesis 2. There is a significant difference in family income among

two-parent families, single-parent families, and grandparenting families.

This hypothesis is significantly supported in this study, as most studies suggested that it would be. By a further analysis of Table 11-12, it could be found that the average family income of two-parent families is significantly greater than that of single-parent or grandparenting families. The result has been expected when I did the data management and found that most parents of children raised in two-parent families work at the Hsinchu Science Park with a higher salary in Hsinchu City. On the contrary, most grandparents who are the primary caregivers are not working or even are retired. The difference in family income among two-parent families, single-parent families, and grandparenting families could be expected to be specifically significant in Hsinchu City because many young parents work at the Hsinchu Science Park and are high-technical workers. On the other hand, the result could be potentially biased because most children of grandparenting families were sampled from Hsinchu Family Helper Project Center of Taiwan Fund for Children and Families (CCF/Taiwan) in this study. Yet it was also discovered that children of grandparenting families sampled from the five junior high schools tend to have low family incomes. This finding may be specifically helpful to professional workers in

education and social welfare in that it suggests potential areas of students' need. For example, these students may be short of funds for lunch at schools, lack a computer at home, and lack means to attend supplementary schools.

Hypothesis 3. There is a significant difference in caregivers'/custodians' educational level between two-parent families, single-parent families, and grandparenting families.

This hypothesis is also significantly supported in this study, as well as by most other studies. In addition, it was found (see Table 14) that the average educational level of parents in two-parent families is higher than that of grandparents in grandparenting families or one parent in single-parent families. Besides, the average educational level of grandparents in grandparenting families seems a little higher than that of the parent in most single-parent families. From the perspective of sufficient knowledge of child rearing and parenting support, this suggests that more attentions should be put not only on grandparenting families, but also on single-parent families.

Hypothesis 4. There is a significant difference in students' GPA depending on whether they are raised in two-parent families, single-parent families, or grandparenting families.

This hypothesis is rejected in this study because there is no evidence to suggest that students' GPA and students' family type are related. This finding refutes the conventional wisdom that children from grandparenting families would have lower academic achievement. This finding may be of special interest to educational professionals because most children of grandparenting families in this study were sampled from Hsinchu Family Helper Project Center of Taiwan Fund for Children and Families (CCF/Taiwan), which serves mostly poor children and families.

Hypothesis 5. There is a significant difference in students' Behavioral Achievement Score (BAS) depending on whether they are raised in two-parent families, single-parent families, or grandparenting families.

This hypothesis is supported when the group "BAS=100" is combined with the group "BAS=90-99". Because most of past studies concluded that children of grandparenting families have a lower behavioral achievement score than other students, a similar result is found in this study. It is also surprising to find (see Table 16 or 17) that 7 students from grandparenting families have a score less than 60, 4 students from single-parent and 1 from two-parent respectively.

Hypothesis 6. Students' risk behavior is significantly correlated with their

family type.

This hypothesis is supported when the dependent variable is tobacco use. Other dependent variables, such as alcohol drinking, substance or drug use, sexual intercourse, engaging in physical fights, and attempted suicide, are not found to be related with students' family type in this study. Though five variables are not found to be statistically related with students' family type, it is found that the frequencies of children's experience of tobacco use, alcohol drinking, and engaging in physical fights are comparatively higher than those of other variables among three families types.

The second research question is asked because I am interested in discovering whether there is a relationship between certain dependent variables, such as between students' family income and academic achievement score (GPA), between family income and behavioral achievement score (BAS), between caregivers'/custodians' educational level and academic achievement score (GPA), and between caregivers'/custodians' educational level and behavioral achievement score (BAS), so the potential influence resulting from family income and caregivers'/custodians' educational level on students' outcomes such as GPA and BAS could be discovered.

Four null hypotheses were made to be tested according to the research question.

Hypothesis 1. A higher level of family income is significantly correlated with students' higher GPA

This hypothesis is rejected in this study because there is no evidence to suggest that family income and GPA are related.

Hypothesis 2. There is a significant correlation between family income and students' Behavioral Achievement Score (BAS).

This hypothesis is rejected in this study because there is no evidence to suggest that family income and BAS are related.

Hypothesis 3. Caregivers'/custodians' educational level is significantly correlated with students' GPA.

This hypothesis is rejected in this study because there is no evidence to suggest that Caregivers'/custodians' educational level and GPA are related.

Hypothesis 4. Caregivers'/custodians' educational level is significantly correlated with students' BAS.

This hypothesis is rejected in this study because there is no evidence to suggest that Caregivers'/custodians' educational level and BAS are related.

These results imply that the potential influence resulting from family income and caregivers'/custodians' educational level on students' outcomes measured by GPA and BAS is not discovered in this study. However, a positive correlation between caregivers'/custodians' educational level and family income and a positive correlation between GPA and BAS are found by applying the Spearman's Rank-order Correlation Test in this study.

Recommendations for Future Research

Based on the results of this study, the following recommendations for future research are made:

1. First, it is recommended that this study be replicated in different junior high schools in Taiwan and, if possible, in high-schools as well. In doing so, findings about children of different areas and age-levels can be compared. Presumably, many of the risks addressed here will be engaged in more frequently by older students.
2. More large-scale, surveys with the data collection process of a random sampling are recommended in order to have more generalizable results.
3. The data collected for this study were based on a self-reporting questionnaire. It

is recommended that future studies include other, qualitative research measures, such as open-ended interviews (Pajares, 1992, p327).

4. It is recommended that future studies include statistical strategies to analyze the results by adding an independent variable--the length of time children being raised by caregivers/custodians--in each family type, so the influence of family types originating from the length of time children being raised by caregivers/custodians can be discovered. Presumably, it makes a difference if children live with caregivers/custodians since their birth or only a few years.
5. Finally, it is recommended that this or similar studies be conducted in different countries of the world in order to compare results of different cultures, as can the influence of cultures be discovered.

Summary

The main purpose of this study is to investigate certain characteristics of children raised in three family types: two-parent, single-parent, and grandparenting in Taiwan. In the past, many reports about children raised in grandparenting families focused attention on children's poor academic achievement and their misbehavior because it was assumed that grandparenting families had many weaknesses (Chiu,

2004; Wu, 2006; *Finding the grandparenting families at high risks*, 2007). This study has tried to sort out some of the myths about, and realities of, grandparenting families.

Two major research questions were considered in this study (1) How do factors including caregivers'/ custodians' ethnicity, family income, caregivers'/custodians' educational level, academic achievement (GPA), behavioral achievement (BAS), risk behaviors (including tobacco use, alcohol drinking, drug use, sexual behavior, violent behavior, and attempted suicide) differ according to the type of family in which students raised in: two-parent, single-parent, or grandparenting? (2) What are the correlations between dependent variables, such as between students' family income and academic achievement score (GPA), between family income and behavioral achievement score (BAS), between caregivers'/custodians' educational level and academic achievement score (GPA), and between caregivers'/custodians' educational level and behavioral achievement score (BAS)? These questions were tested through a quantitative survey. One hundred fifty male and female students in the seventh to ninth grades of five junior high schools and the Hsinchu Family Helper Project Center of Taiwan Fund for Children and Families (CCF/Taiwan) in the Hsinchu Area, Taiwan participated in this study. A 34-item, self-reporting questionnaire was used as the

instrument of data collection. After completion of data collection, data were entered into the Statistical Package for the Social Sciences (SPSS), 13th Chinese edition, to acquire the results. Major findings resulting from this study include:

1. Not every characteristic (factor) found to be related with the family type in which children are raised in other studies is found to be related with the family type. Only are family income, caregivers'/custodians' educational level, students' behavioral achievement score (BAS), and tobacco use, found to be related to family types. In other words, only two children's outcomes, the behavioral achievement score (BAS), and tobacco use, are found to have a relationship with the family type in which children are raised.
2. Family income or caregivers'/custodians' educational level is not related to students' GPA or BAS. In other words, family income and caregivers'/custodians' educational level would not have a potential influence on students' achievement outcomes.
3. A family with a higher caregiver's/custodian's educational level would have a higher family income.
4. A student with a high GPA tends to have a high BAS.

Finally, some meaningful implications for parents/grandparents, teachers, and other professional workers in education and social welfare are provided, and recommendations for future research are described by the findings of this study.

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APPENDICES

APPENDIX A

The Major Questionnaire

* *Note:* Students are the major respondents of this questionnaire. Please mark “v” on the appropriate answer of each question. If you prefer not to answer any specific question, you can leave the answer blank and choose not to answer it! Do not write your name on the questionnaire. If you feel upset or uncomfortable after finishing the questionnaire, please visit the counseling center of your school as soon as possible!

1. Your Grade: ☐7 ☐8 ☐9

2. Your Age: _____

3. Your Gender: ☐Male ☐Female

4. Who is your primary caregiver/custodian at present?

☐Both parents

☐One parent (Father or Mother)

☐Paternal grandparents or one grandparent

☐Maternal grandparents or one grandparent

☐Other (please indicate)

5. How long have you lived with your primary caregiver/custodian? ☐Since my birth ☐Other (please indicate) _____

6. What is the educational level of your primary caregiver/custodian?

☐Graduate School Degree ☐College or University Degree ☐High School

Graduate ☐Junior High School Graduate ☐Elementary School Graduate

☐Illiteracy

☐I don't know

7. What is the occupation of your primary caregiver/custodian?

Occupation: _____; Position: _____

☐ Not working, the reason is: _____

8. If your primary caregivers/custodians are your paternal grandparents or maternal grandparents, the main reason is:

☐ Parents are working outside of the home or hometown ☐ Parents are divorced

☐ Parents have passed away (both or one of them) ☐ Mother is unmarried

☐ Other (please indicate) _____

9. Your Father's Ethnicity is : ☐ Fukien Taiwanese ☐ Hakka Taiwanese ☐ China

Provinces ☐ Native Taiwanese ☐ Other (please indicate) _____

Your Mother's Ethnicity is: ☐ Fukien Taiwanese ☐ Hakka Taiwanese ☐ China

Provinces ☐ Native Taiwanese ☐ Other (please indicate) _____

10. If your primary caregivers/custodians are your paternal grandparents or maternal grandparents, your Grandfather's Ethnicity is:

☐ Fukien Taiwanese ☐ Hakka Taiwanese ☐ China Provinces ☐ Native Taiwanese

☐ Other (please indicate) _____

Your Grandmother's Ethnicity is: ☐ Fukien Taiwanese ☐ Hakka Taiwanese

☐ China Provinces ☐ Native Taiwanese ☐ Other (please indicate) _____

11. The GPA you got last semester in the school:

☐ 100 ☐ 90-99 ☐ 80-89 ☐ 70-79 ☐ 60-69 ☐ Below 60

The Behavioral Achievement Score you got last semester in the school:

☐ 100 ☐ 90-99 ☐ 80-89 ☐ 70-79 ☐ 60-69 ☐ Below 60

12. Your Family Income/Month (TWD):

- ☐ Less than 20,000 ☐ 20,001~25,000 ☐ 25,001~30,000 ☐ 30,001~35,000
☐ 35,001~40,000 ☐ 40,001~45,000 ☐ 45,001~50,000 ☐ 50,001~55,000
☐ 55,001~60,000 ☐ 60,001~65,000 ☐ 65,001~70,000 ☐ Above 70,000

The questions **13-16** ask about tobacco use.

13. Have you ever tried cigarette smoking, even one or two puffs?

- ☐ Yes ☐ No

14. How old were you when you smoked a whole cigarette for the first time?

- ☐ I smoked a whole cigarette for the first time when I was _____ years old.

Or

- ☐ I have never smoked a whole cigarette.

15. Have you ever smoked cigarettes daily, that is, at least one cigarette every day for 30 days?

- ☐ Yes ☐ No

16. Are you currently smoking?

- ☐ Yes

- How many cigarettes are you roughly smoking per day?

- ☐ 1-3 ☐ 4-6 ☐ 7-9 ☐ 10-12 ☐ 13 or more

Or

- ☐ No, I am not currently smoking.

The questions **17-19** ask about drinking alcohol. This includes drinking beer, wine, wine coolers, and liquor such as rum, gin, vodka, or whiskey. For these questions, drinking alcohol does not include drinking a few sips of wine for religious purposes.

17. Have you ever had a drink of alcohol, other than a few sips?

- ☐ Yes ☐ No

18. How old were you when you had your first drink of alcohol other than a few sips?

- ☐ I had my first drink of alcohol other than a few sips when I was _____ years old.

Or

☐ No, I have never had a drink of alcohol other than a few sips.

19. Are you currently drinking?

☐ Yes

- How much alcohol are you drinking on an average per day? _____ cups (or) bottles.

Or

☐ No, I am not currently drinking.

The questions **20-24** ask about marijuana and drug use.

20. Have you ever used marijuana?

☐ Yes,

- I tried marijuana for the first time when I was _____ years old.

Or

☐ No, I have never tried marijuana.

21. Have you ever used any form of cocaine, including powder, crack, or freebase?

☐ Yes,

- I used any form of cocaine for the first time when I was _____ years old.

Or

☐ No, I have never used any form of cocaine.

22. Have you ever sniffed glue, or breathed the contents of spray cans, or inhaled any paint or sprays to get high?

☐ Yes,

- I sniffed glue, or breathed the contents of spray cans, or inhaled any paint or sprays to get high for the first time when I was _____ years old.

Or

☐ No, I have never tried these.

23. Have you ever used steroid pills or shots without a doctor's prescription?

☐ Yes,

- I used steroid pills or shots without a doctor's prescription for the first time when I was _____ years old.

Or

☐ No, I never used steroid pills or shots without a doctor's prescription.

24. Do you currently use these drugs (including marijuana, cocaine, glue, or steroid pills or shots) without a doctor's prescription?

☐ Yes,

- I am using ☐ marijuana ☐ cocaine ☐ glue ☐ steroid pills or shots

Or

☐ No, I am not using any of these drugs.

The questions **25-28** ask about sexual intercourse.

25. Have you ever had sexual intercourse?

☐ Yes ☐ No

26. How old were you when you had sexual intercourse for the first time?

☐ I had sexual intercourse for the first time when I was _____ years old.

Or

☐ No, I have never had sexual intercourse.

27. With how many people have you ever had sexual intercourse?

☐ I have never had sexual intercourse

☐ 1 person

☐ 2 people

☐ 3 people

☐ 4 people

☐ 5 people

☐ 6 or more people

28. The last time you had sexual intercourse; did you or your partner use a condom?

☐ I have never had sexual intercourse.

☐ Yes

☐ No

The questions **29-30** ask about violence-related behaviors.

29. Have you ever been in a physical fight?

☐ Yes, and when was the last time you were involved in a physical fight?

(Please indicate)_____

Or

☐ No

30. Have you ever been in a physical fight in which you were hurt and had to be treated by a doctor or nurse?

☐ Yes ☐ No

The questions **31-34** ask about attempted suicide. Sometimes people feel so depressed about the future that they may consider attempting suicide or killing themselves.

31. Have you ever seriously thought about killing yourself?

☐ Yes ☐ No

32. Have you ever made a plan about how you commit suicide?

☐ Yes ☐ No

33. Have you ever tried to commit suicide?

☐ Yes ☐ No

34. Do you currently have any thoughts of committing suicide?

☐ Yes ☐ No

This is the end of the questionnaire.

Thank you very much for your great help once again!

**(After finish the questionnaire, please seal the completed questionnaire
in the enclosed envelope)**

APPENDIX B

Chinese Questionnaire (中文問卷內容)

主問卷

(學生為此份問卷的主要回答者，請在每個問題的適當□內註記“√”；若你(妳)不想回答問卷內某個特定的問題，可將該問題保留空白而不予回答。不要在問卷上寫下你或妳的名字。如果在完成問卷填寫後覺得不愉快或心情沮喪，請立刻前往學校的輔導室尋求協助或諮商!)

1. 你(妳)現在是幾年級：☐國一☐國二☐國三

2. 你(妳)現在的年齡是：_____歲

3. 你(妳)的性別是：☐男生☐女生

4. 你(妳)現在生活上的主要照顧者或監護人是你(妳)的：

☐爸爸和媽媽兩人共同照顧☐只有爸爸或媽媽其中的一人☐爺爺

及奶奶或爺爺及奶奶其中的一人☐外公及外婆或外公及外婆其中的一人

☐其它(請詳加註明)_____

5. 承接上一個問題，你(妳)和你(妳)的主要照顧者或監護人住在一起

多久了？☐自出生後就住在一起☐其它(請註明時間)：_____

6. 承接第四題，你(妳)的主要照顧者或監護人的教育程度是：

☐研究所畢業(碩博士以上學歷)☐大學(專)畢業☐高中畢業

☐國中畢業☐小學畢業☐不識字☐不知道

7. 承接第四題，你(妳)的主要照顧者或監護人現在的職業是：

☐ 有工作，職業是：_____，職稱是：_____

☐ 無工作，原因是：_____

8. 承接第四題，若你(妳)的主要照顧者或監護人是你(妳)的爺爺、奶奶，或是外公和外婆(不是者免填此題)，主要是因為：

☐ 爸爸媽媽在外面(地)工作 ☐ 爸爸與媽媽離婚 ☐ 爸爸媽媽兩人或
爸爸媽媽其中一人已去世 ☐ 媽媽未婚 ☐ 其它(請詳加註明)_____

9. 你(妳)爸爸的籍貫是：☐ 閩南人 ☐ 客家人 ☐ 外省籍 ☐ 台灣原住民

☐ 其它(請詳加註明)_____

你(妳)媽媽的籍貫是：☐ 閩南人 ☐ 客家人 ☐ 外省籍 ☐ 台灣原住民

☐ 其它(請詳加註明)_____

10. 承接第四題，若你(妳)的主要照顧者或監護人是你(妳)的爺爺、奶奶，或是外公和外婆(不是者免填此題)，他們的籍貫是：

爺爺或外公：☐ 閩南人 ☐ 客家人 ☐ 外省籍 ☐ 台灣原住民

☐ 其它(請詳加註明)_____

奶奶或外婆：☐ 閩南人 ☐ 客家人 ☐ 外省籍 ☐ 台灣原住民

☐ 其它(請詳加註明)_____

11. 你(妳)上學期在學校的學業總平均成績是：

☐100 分 ☐90-99 分 ☐80-89 分 ☐70-79 分 ☐60-69 分 ☐60 分以下

操行(行為表現)總平均成績是：

☐100 分 ☐90-99 分 ☐80-89 分 ☐70-79 分 ☐60-69 分 ☐60 分以下

12. 你(妳)們家的平均月收入大約是新台幣多少元：

☐少於 20,000 元 ☐20,001-25,000 元 ☐25,001-30,000 元

☐30,001-35,000 元 ☐35,001-40,000 元 ☐40,001-45,000 元

☐45,001-50,000 元 ☐50,001-55,000 元 ☐55,001-60,000 元

☐60,001-65,000 元 ☐65,001-70,000 元 ☐70,000 元以上

(下面四題是有關你(妳)使用香煙與否的問題)

13. 你(妳)過去有沒有吸煙(即使只是嘗試吸一至兩口)的經驗？

☐有 ☐沒有

14. 當你(妳)第一次抽一整支香煙的經驗時, 你(妳)當時的年齡是：

☐我_____歲時即有抽一整支香煙的經驗

或

☐我從來沒有抽一整支香煙的經驗

15. 你(妳)曾經有沒有一段時間每天都抽煙的經驗？

☐有☐沒有

16. 你(妳)現在還有抽煙習慣嗎?

☐有, 且平均每天抽☐1-3支☐4-6支☐7-9支☐10-12支☐13支以上

或

☐沒有, 我現在沒有抽煙的習慣

(下面三題是關於喝酒與否的問題, 但若因宗教之特別需要而喝酒, 則
不屬於下列三題定義的喝酒)

17. 你(妳)過去有沒有喝酒超過只是嘗試一小口的經驗?

☐有☐沒有

18. 當你(妳)第一次喝酒超過只是一小口的經驗時, 你(妳)當時的年
齡是:

☐我_____歲時即有喝酒超過只是一小口的經驗

或

☐我從來沒有喝酒超過只是一小口的經驗

19. 你(妳)現在還有喝酒習慣嗎?

☐有, 且我平均每天喝_____ (杯)(瓶)酒(請圈選單位)

或

☐沒有,我現在沒有喝酒的習慣

(下面五題是有關於你(妳)對於物質或藥物使用的問題)

20. 你(妳)過去有沒有吸過大麻的經驗?

☐有,而且我在_____歲時有了第一次吸食大麻的經驗

或

☐沒有,我從來沒有吸食大麻的經驗

21. 你(妳)過去有沒有使用過任何類型(如粉狀或液狀)的古柯鹼?

☐有,而且我在_____歲時有了第一次使用古柯鹼的經驗

或

☐沒有,我從來沒有使用古柯鹼的經驗

22. 你(妳)過去有沒有吸食強力膠的經驗?

☐有,而且我在_____歲時有了第一次吸食強力膠的經驗

或

☐沒有,我從來沒有吸食強力膠的經驗

23. 你(妳)過去有沒有在無醫師處方下使用類固醇的口服或注射藥物?

☐有,而且我在_____歲時就有在無醫師處方下使用類固醇的口服

或注射藥物的經驗

或

☐沒有,我從來沒有無醫師處方下使用類固醇的口服或注射藥物的

經驗

24. 你(妳)現在有沒有正在使用任何一個上述(包含「大麻」、「古柯鹼」、「強力膠」、「無醫師處方下的類固醇」)的物質或藥物?

☐有,而且我正在使用☐大麻☐古柯鹼☐強力膠☐無醫師處方下的

類固醇口服或注射藥物

或

☐沒有,我現在沒有使用上述任何物質或藥物

(下面四題是有關個人性經驗的問題)

25. 你(妳)有沒有過實際的性交經驗?

☐有☐沒有

26. 承上題,我在_____歲時有了第一次的性交經驗

或

☐沒有,我從來沒有實際的性交經驗

27. 續二十五題,若你(妳)有過性經驗,你(妳)曾有過的性伴侶人數

是：

☐我從來沒有實際的性交經驗

或

☐一人☐二人☐三人☐四人☐五人☐六人或以上

28. 在你(妳)最後一次的性交經驗中, 你或對方有沒有使用保險套?

☐我從來沒有過實際的性交經驗

☐有使用保險套

☐沒有使用保險套

(下面兩題是有關暴力行為相關的問題)

29. 你(妳)有沒有參與過打架行為?

☐有, 而且我在_____歲時有了第一次參與和別人打架之經驗

或

☐沒有, 我從來沒有參與過打架的經驗

30. 你(妳)有沒有因為參與打架行為而需就醫的經驗?

☐有☐沒有

(下面四題是有關自殺意圖的問題)

31. 你(妳)有沒有認真想要自殺的經驗?

☐有☐沒有

32. 你(妳)有沒有計畫過自殺及如何自殺的經驗?

☐有☐沒有

33. 你(妳)有沒有實際自殺過的經驗?

☐有☐沒有

34. 你(妳)目前有沒有想要自殺的念頭?

☐有☐沒有



問題結束, 再次感謝你(妳)們的幫忙及回答囉!!

(請於填寫完後置於所附信封內黏好交回)

APPENDIX C

Human Subjects Committee Lawrence Approval Letter

10/10/2007

HSCL #16848

Hui-Chi Yang

515 Graystone Dr., #3

Lawrence, KS 66049

The Human Subjects Committee Lawrence has received your response to its full IRB review of your research project,

16848 Yang/Rice (T & L) Characteristics of Children Raised in Three Types of Families in Taiwan

and found that it complied with policies established by the University for protection of human subjects in research. The subjects will be at minimal risk. Unless renewed, approval lapses one year after approval date.

The Office for Human Research Protections requires that your consent form must include the note of HSCL approval and expiration date, which has been entered on the consent form sent back to you with this approval.

1. At designated intervals until the project is completed, a Project Status Report must be returned to the HSCL office.
2. Any significant change in the experimental procedure as described should be reviewed by this Committee prior to altering the project.
3. Notify HSCL about any new investigators not named in original application. Note that new investigators must take the online tutorial at <http://www.research.ku.edu/tutor/hsp/index.shtml>.
4. Any injury to a subject because of the research procedure must be reported to the Committee immediately.

5. When signed consent documents are required, the primary investigator must retain the signed consent documents for at least three years past completion of the research activity. If you use a signed consent form, provide a copy of the consent form to subjects at the time of consent.
6. If this is a funded project, keep a copy of this approval letter with your proposal/grant file.

Please inform HSCL when this project is terminated. You must also provide HSCL with an annual status report to maintain HSCL approval. Unless renewed, approval lapses one year after approval date. If your project receives funding which requests an annual update approval, you must request this from HSCL one month prior to the annual update. Thanks for your cooperation. If you have any questions, please contact me.

Sincerely,

Mary Denning

Co-Coordinator

Human Subjects Committee Lawrence

cc: Suzanne Rice

APPENDIX D

Information Statement for Caregivers/Custodians

Characteristics of Children Raised in Three Types of Families in Taiwan

The Department of Teaching and Leadership in Education at the University of Kansas supports the practice of protection for human subjects participating in research. The following information is provided for you to decide whether or not you will allow your child to participate in this study. You should be aware that even if you agree to have your child participate, your child is free to withdraw from the study at any time without penalty.

We are conducting this study to better understand characteristics of children raised in different family types. Your child will be the main respondent of the questionnaire at school. However, your child may need your assistance in answering some questions, such as: “Caregiver’s/Custodian’s Ethnicity”, “Caregiver’s/Custodian’s Occupation with Position”, or “Your Family Income”. This questionnaire is expected to take approximately 15-30 minutes to complete at school. This 34-item questionnaire includes 12 demographic and general information questions related to your child, such as: “Child’s Grade, Age, and Gender”, “Caregiver’s/custodian’s ethnicity”, “Monthly family income”, “Caregiver’s/custodian’s educational level”, “Child’s GPA, and behavioral achievement score”. The remaining 22 questions are related to the involvement of your child’s present or past experiences with risky behaviors such as smoking, drinking, substance or drug use, sexual behavior, violence-related behavior, and attempted suicide. For example, one question is: “Have you ever tried cigarette smoking, even one or two puffs?”

There is absolutely no anticipated physical risk associated with this study. However, some questions, such as those related to child’s involvement and experience of smoking, drinking, substance or drug use, sexual behavior, violence-related behavior, and attempted suicide, may cause your child some psychological stress when answering them. Therefore, your child’s participation is strictly voluntary. In addition, this questionnaire is anonymous, so your child will be asked not to write his (her) name on the questionnaire, and your child will also be asked to place his or her finished questionnaire in a prepared empty envelope. Neither your name nor your child’s name will be associated in any way with the research findings from this study. Therefore, your child should not be afraid of genuinely answering questions related to

the involvement of risk behaviors because nobody will know how your child has answered. On the other hand, however, there will be no way to know if your child is in danger of those risky behaviors or not. If your child really feels upset and stressed out after finishing the questionnaire, I strongly remind you that you should suggest your child to visit the counseling center of the school to talk to the professional counselors or seek practical supports from them as soon as possible.

Although participation in this study may not benefit you and your child directly, we believe the information obtained from this study will help us gain a better understanding of characteristics of children raised in different family types. In addition, the summary data of this study will be released to your child's school for the reference of reinforcing counseling in the future. If you would like additional information concerning this study before or after it is completed, please feel free to contact us by phone or mail as listed below.

Finally, if you have any additional questions about your child's rights as a research participant, you may call (in the U.S.A) : (785) 864-7429 or write the Human Subjects Committee Lawrence Campus (HSCL), University of Kansas, 2385 Irving Hill Road, Lawrence, Kansas 66045-7563, email dhann@ku.edu or mdenning@ku.edu, or directly call Yang Hui-Chi, Hsinchu City Government, 03-521612 ext 559.

Sincerely,

Yang, Hui-Chi (Angela)

Principal Investigator/ Graduate Student
Department of Teaching and Leadership
in Education

Joseph R. Pearson Hall

University of Kansas

Lawrence, KS 66045

785-3174806

huichi@ku.edu

Suzanne Rice, Ph.D.

Faculty Supervisor/Graduate Faculty
Department of Teaching and Leadership
in Education

Joseph R. Pearson Hall

University of Kansas

Lawrence, KS 66045

785-8649733

srice@ku.edu

Child's Name

Date

Caregiver's/Custodian's Signature

With my signature, I acknowledge that I have received a copy of this consent form to keep.

APPENDIX E

Chinese Information Statement for Caregivers/Custodians
(予照顧者/監護人之同意學童參與問卷調查之中文內容)

在台灣地區成長於三種家庭型態的孩童特徵調查性研究

美國堪薩斯大學教育學院之教學及領導管理學系支持參與研究之參與者的人權保護。以下的訊息提供予你(妳)以決定是否准予您的孩子參加這個問卷調查。然而，即使你(妳)已同意您的孩子參加這個問卷調查，您的孩子可在任何時間或情形下退出參與這個問卷調查而不會有任何懲罰。

這個研究主要的目的是使研究者更加了解不同家庭型態(包含雙親、單親、及隔代教養家庭)之學童特徵。您的孩子是此份問卷的主要回答者。然而，您的孩子可能需要您的協助回答如「您的籍貫」、「您的職業及職稱」、「您的家庭收入」等類問題。這份問卷大約會花費您的孩子約十五至三十分鐘在學校完成填寫。問卷內容共計三十四題，其中包含十二題有關孩童相關的基本資料如孩童之年級、年齡、性別、照顧者/監護人籍貫、家庭收入、照顧者/監護人之教育程度、以及孩子之學業及行為表現成績等;其餘二十二題是有關學童現在或過去參與行為如抽煙、喝酒、物質與藥物使用、性行為、暴力及自殺行為等之經驗調查。譬如，其中一個問題為：「你(妳)過去有沒有喝酒超過只是嘗試一小口的經驗？」

您的孩子參加這個問卷調查絕對不會有任何生理上的危險。然而，有些問題如問到有關孩童現在或過去參與如抽煙、喝酒、物質與藥物使用、性行為、暴力及自殺等之行為經驗可能會引起您的孩子心理不適或沮喪。因此，您的孩子是否參加這個問卷調查絕對是自願性質。此外，為保護孩子的隱私與權益，這份問卷是採匿名方式填寫，且填完問卷後孩童將以自黏信封裝入完成之問卷繳回研究者，所以您與孩子的名字絕對不會與研究結果有任何聯結。故您的孩子不需擔憂真實回答有關現在或過去參與如抽煙、喝酒、物質與藥物使用、性行為、暴力及自殺等之行為經驗之問題，因為沒有人會知道您的孩子回答的內容。然而就另一方面而言，就沒有人能了解是否您的孩子目前正從事一些危險行為，特別是物質與藥物使用、暴力及自殺等。假設您的孩子在完成問卷後有心理不適或沮喪的現象，提醒您建議您的孩子儘快前往學校的輔導室與專業的諮商及輔導老師尋求實際的協助。

即使您的孩子參與本問卷之調查可能無法直接受益，然而研究者堅信您的孩子之參與，將使研究者更加了解在台灣地區不同家庭型態之學童特徵。此外，本研究之綜合性調查結果將釋予參與研究孩童的學校，以做為學校未來諮商及輔導工作之參考。最後，若您或您的孩

子對於本研究其他資訊、參加本項研究的權益、或問卷的內容及填寫
仍有任何問題，歡迎您隨時來電(美國地區):785-8647429 或寫信至
the Human Subjects Committee Lawrence Campus (HSCL), University of Kansas,
2385 Irving Hill Road, Lawrence, Kansas 66045-7563, U.S.A. ; or email
dhann@ku.edu (台灣地區): 03-5216121 分機 559 或 email:
angela5772@hotmail.com 予研究者楊慧琪連絡. 再次感謝您與孩子
的協助及參與!!

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學生簽名

日期

照顧者/監護人簽名

以上本人簽名代表本人已收至這份同意信函之影本乙份保存。

APPENDIX F

Information Statement for Students

Characteristics of Children Raised in Three Types of Families in Taiwan

Hi, dear students, how is this semester going so far?

My name is Hui-Chi Yang, a PhD student of the Department of Teaching and Leadership in School of Education at the University of Kansas. Because our university supports the practice of protection for human subjects participating in research, the following information is provided for you to decide whether you wish to participate in the present study. You should know that even if you agree to participate, you are free to stop it at any time and that will be absolutely alright.

We are interested in finding out the characteristics of children raised in three types of families in Taiwan, so we would like you to take a questionnaire that is expected to take approximately 15-30 minutes to complete at school. This 34-item questionnaire includes 12 demographic and general information questions related to you, such as: “Your Grade, Age, and Gender”, “your caregiver’s/custodian’s ethnicity”, “your monthly family income”, “your caregiver’s/custodian’s educational level”, “your GPA and behavioral achievement score”. The other 22 questions will be asking you about your current and past experiences with risky behaviors like smoking, drinking, substance or drug use, sexual behavior, violence-related behavior, and attempted suicide. For example, one question is: “Have you ever tried cigarette smoking, even one or two puffs?” If you are not sure how to answer some questions, such as: “Caregiver’s/Custodian’s Ethnicity”, “Caregiver’s/Custodian’s Occupation with Position”, or “Your Family Income”, you can ask your caregiver or custodian before you answer the questionnaire at school.

There is absolutely no anticipated physical risk associated with this study. However, some questions, such as those related to your involvement and experience of smoking, drinking, substance or drug use, sexual behavior, violence-related behavior, and attempted suicide, may cause you upset when answering them. Therefore, your participation is solicited, but it is still voluntary. In addition, this questionnaire is anonymous so please don’t write down your name on the questionnaire. Please leave your finished questionnaire in the prepared empty envelope. Your name will never be associated in any way with the research findings from this study. Therefore, you should not be afraid of genuinely answering questions related to the involvement of risk behaviors because nobody will know how you have

answered. If you really feel upset and stressed out after finishing the questionnaire, I strongly suggest that you should visit the counseling center of your school to talk to the counselor or seek practical supports as soon as possible. In addition, the summary data of this study will be released to your school for the reference of reinforcing counseling in the future.

Completion of this questionnaire indicates your willingness to participate in this study. If you have any additional questions about your rights as a research participant, you may call Yang Hui-Chi 03-5216121 ext 559. Do you want to fill out this questionnaire? If yes, **let's begin!!**

Sincerely,

Yang, Hui-Chi (Angela)

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APPENDIX G

Chinese Information Statement for Students
(予學童參與問卷調查資訊之中文內容)

在台灣地區成長於三種家庭型態的孩童特徵調查性研究

嗨!親愛的同學們，這學期到目前還進行地順利嗎?

我的名字是楊慧琪，目前就讀於美國堪薩斯大學教育學院之教學及領導管理學系博士班；因為學校支持參與研究之參與者的人權保護。以下的訊息提供予你(妳)以決定是否願意參加這個問卷調查。然而，即使你(妳)已同意參加這個問卷調查，你(妳)仍可在任何時間或情形下退出參與這個問卷調查而不會有任何問題。

這個研究主要的目的是使研究者發現台灣三種家庭型態之學童特徵，所以要請你(妳)在學校花約十五到三十分鐘在學校完成這個問卷。問卷內容共計三十四題，其中包含十二題有關你(妳)的基本資料如年級、年齡、性別、照顧者/監護人籍貫、家庭收入、照顧者/監護人之教育程度、以及學業及行為表現成績等；其餘二十二題是有關你(妳)現在或過去參與行為如抽煙、喝酒、物質與藥物使用、性行為、暴力及自殺行為等之經驗調查。譬如，其中一個問題為：「你(妳)過去有沒有喝酒超過只是嘗試一小口的經驗?」。假使有些問題，如照顧者/監護人籍貫、家庭收入、照顧者/監護人之教育程度等你(妳)不確定答案為何，你(妳)可以事先先問家裏的父母、照顧者、或監護人後

再到學校完成問卷。

參加這個問卷調查絕對不會有任何生理上的危險。然而，有些問題如問到有關你(妳)現在或過去參與如抽煙、喝酒、物質與藥物使用、性行為、暴力及自殺等之行為經驗可能會引起心理不適或沮喪。因此，是否參加這個問卷調查絕對是自願性質。此外，為保護你(妳)的隱私與權益，這份問卷完全是採匿名方式填寫，所以請不要在問卷上寫下你(妳)的名字；而且，填完問卷後請將它裝入附給你(妳)們的自黏信封繳回給我，所以你(妳)的名字絕對不會與這個研究結果有任何聯結。故你(妳)不需擔憂真實回答有關現在或過去參與如抽煙、喝酒、物質與藥物使用、性行為、暴力及自殺等之行為經驗之問題，因為沒有人會知道你(妳)回答的內容。假若你(妳)在完成問卷後有心理不適或沮喪的現象，建議你(妳)儘快前往學校的輔導室與專業的諮商及輔導老師尋求實際的協助。除此之外，本研究之調查綜合性結果將釋予你(妳)們的學校，以做為學校未來諮商及輔導工作之參考。

完成這份問卷即代表你(妳)願意參加這項調查研究。如果你(妳)對於參加本項研究的權益仍有其他問題，可以打電話至 03-5216121 分機 559 或 email: angela5772@hotmail.com 予研究者楊慧琪連絡。

所以想不想參加這個問卷調查?如果可以，現在就開始吧!